INNER CITY

TRANSPORTATION SYSTEM MANAGEMENT STRATEGY

THE CITY OF CALGARY
LAND USE AND MOBILITY

PUBLISHING INFORMATION

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ADDITIONAL COPIES:	THE CITY OF CALGARY PLANNING & TRANSPORTATION POLICY INFORMATION CENTRE #8115 P.O. BOX 2100, Stn M CALGARY, ALBERTA T2P 2M5 PHONE: (403) 268-5333 FAX: (403) 268-4615 WEB: www.gov.calgary.ab.ca/planning/land_use_planning/publications/

INNER CITY TRANSPORTATION SYSTEM MANAGEMENT STRATEGY

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1.0 STUDY CONTEXT

The area under study is generally the Inner City as defined in the Land Use Bylaw 2P80. The area has been expanded along some roadways to examine specific transit measures and when possible solutions to Inner City issues that lie beyond the study area.

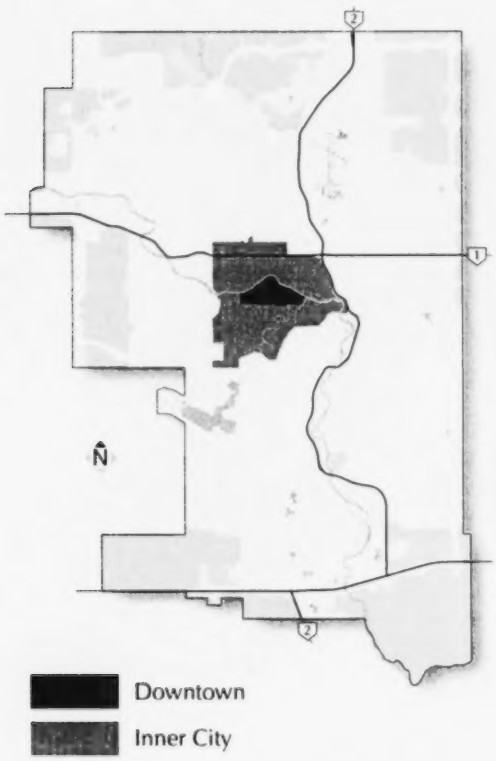
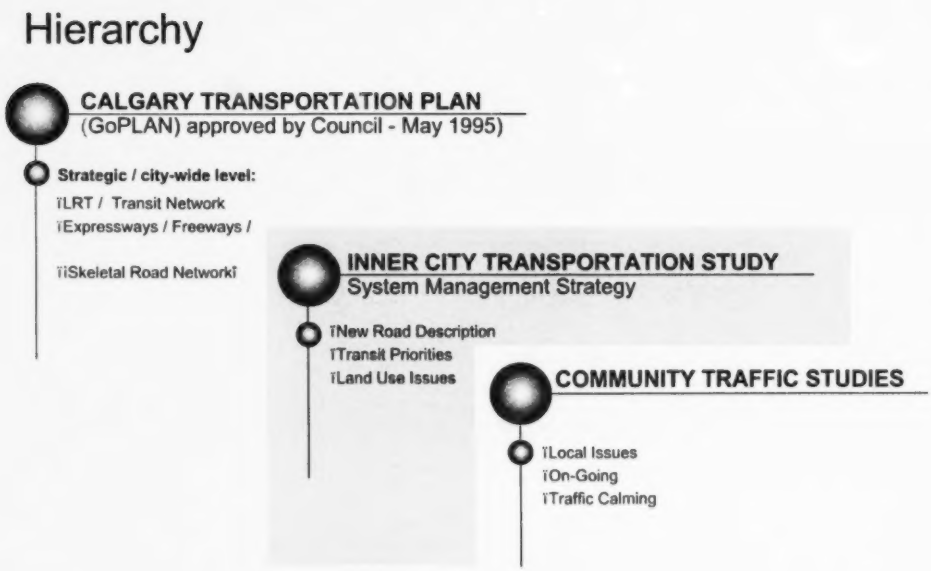


FIGURE 1 STUDY

FIGURE 2 HIERARCHY OF PLANNING ACTIVITIES



In terms of the hierarchy of planning activities and decisions, the Inner City Transportation Study (ICTS) provides a more detailed review of transportation issues for the area outlined on Map 1 than the strategic city-wide Calgary Transportation Plan (CTP).

2.0 CALGARY TRANSPORTATION PLAN (CTP)

The Calgary Transportation Plan (CTP) was approved in May 1995, following the most exhaustive public participation and technical process in the history of the City. That process is more commonly referred to as GoPlan. The purpose of GoPlan was to develop a strategic city-wide transportation network and land use plan that would provide for future growth up to the 1.25 million population.

The CTP is based on a long term aspirational vision that attempts over time to maintain a balance, or equilibrium, among the three competing forces: Mobility, Cost/Affordability and Quality of Life. It is a broad city-wide vision that will only come about if Calgarians make fundamental choices that support the vision, and through the implementation of a diverse range of initiatives and plans such as ICTS.

The GoPlan process identified dominant urban form, growth, and behavioural dynamics which shape the city today and will continue to do so well into the future. Accordingly, the opportunity to affect the most significant change is focused on our future growth of an additional 500,000 people and 340,000± jobs as we grow to a City of 1.25 million. Achieving the CTP aspirations, as they relate to future growth and changing behaviours will require a commitment to change and new initiatives.

From a quality of life and mobility perspective no other area of the city is as influenced by these urban form, growth and behaviour dynamics as the Inner City. The degree to which the Inner City Transportation System Management Strategy succeeds is most dependent on achieving two key aspirations, land use and behavioural change and making the necessary Transportation Infrastructure Investments.

The ideas and concepts in this ICT Strategy paper are consistent with the basic assumptions of the CTP accordingly, it is assumed that Calgarians will achieve the long term aspirations they advocated. Council's 1999 approval of the Transportation infrastructure Investment Program is a major step forward. Notwithstanding this, the recommendations for the Inner City contained in the strategy are robust enough to stand on their own and are not dependent or diminished if we do not fully achieve the CTP aspirations.

3.0 ICTS TERMS OF REFERENCE

CTP

In 1995, the CTP put forward the following position related to Inner City concerns and issues:

> "Maintaining healthy and vibrant communities capable of adapting to change, and attracting a reasonable share of growth is a key thrust of the proposed land use strategy. In order to achieve the forecast levels of growth in established communities, the impact of the road hierarchy, its operation and adjacent land uses beneath the "skeletal" network level should be reviewed. There are aspects of the existing hierarchy (e.g., widening setbacks, reverse lanes, road classifications, etc.) which may be at odds with community objectives related to quality of life and the ongoing viability of local businesses adjacent to roadways. These have to be considered in the context of city-wide goals as expressed in the Calgary Transportation Plan; however, it is recognized that attracting growth into existing communities is just as dependent on certainty, and qualify of environment as it is in the new suburbs."

(Calgary Transportation Plan, page 2-3)

This lead to the approval of the Terms of Reference for the ICTS including the following statements:

The CTP is a plan based on a Vision which is substantially driven by public aspirations which challenge the status quo and the dominance of current trends in shaping the future. By 2024, the plan aims to have struck a reasonable balance between Mobility, Community & Environment Quality, and Cost/Affordability. The balance that the Inner City Study must strike is primarily focused on Mobility and Community & Environment Quality.

The primary focus of the Inner City Transportation Study will be to review the role and function of the "main" roads (major streets and "network" collectors) within the content of the approved CTP, serving the Downtown and Inner City Area. It is anticipated that the study will produce a plan to manage the system in the short and long terms, with the aim of fulfilling the objectives of the CTP. The Study will further explore transit corridor concepts included in the CTP by identifying specific bus priority locations and measures to enhance Calgary Transit's role over the thirty year period.

PUBLIC INVOLVEMENT

The concerns and issues expressed above were subsequently confirmed and expanded upon through an extensive issue identification process as part of the ICTS. This process involved a Council appointed ICTS Round Table working with the Civic Administration, Public Input and a review of proposals by an Independent Technical Panel. This paper documents the results of that process rather than the process itself. Details of the process itself are available from the Planning Policy Business Unit.

The Ongoing Challenge! Growth!

CTP Population	2024	1.25 million
Revised Population	2020	1.25 million
(i.e., the City reaches the same population level five years earlier than envisaged in CTP.)		
CTP Employment	2024	585,241
Revised Employment	2010	557,798
	2015	616,800
(i.e., the City reaches the CTP projected employment between 10 and 12 years earlier than anticipated.)		

The Calgary Transportation Plan was approved by Council in 1995 May. The growth forecasts that accompanied that plan were prepared in the earlier part of the decade and influenced somewhat by a mild recessionary period during that time. In August of 1998 the ICTS Discussion Paper was released and revealed the first evidence of a changing growth picture for the city at large. The following data represents a survey of the most recent relevant information as it pertains to this study. More comprehensive information is included in Appendix I`. Therefore in 2020 there will be 100,000 more jobs than CTP assessed in 2024.

On the positive side increased new housing construction in the Downtown, Lindsay Park, Connaught and Garrison Woods, along with proposals in East Village, Bow Valley Centre and CFB West are enhancing the attractiveness of the Inner City as a place to live and are consistent with the Plan.

The CTP "vision" translated into a snapshot in 2024 that had only 1,000 more vehicle trips into the downtown and all of the remaining Downtown growth accommodated by transit, walk and cycle. Clearly, that picture is not going to unfold as envisioned and while new infrastructure investments will provide relief system wide, it will now only provide a measure of relief, nonetheless,

far better than what would have been for the Inner City. Volumes have and are going to increase throughout the network, particularly with inner city. As a result the logical emphasis for the Inner City Strategy is to now to focus on ensuring the main routes can carry appropriate levels of traffic while focussing on traffic calming and driver behaviour, particularly safety and creating the optimal environment for transit, pedestrians and cyclists.

4.0 ISSUES

During the development of the Terms of Reference for the ICTS study citizens and stakeholders brought forward a multitude of Inner City issues of concern to them. In addition, the CTP (GoPlan) process provided a forum for many more issues that were not dealt with in that process, as they were not considered strategic from a city-wide perspective.

Early in the roundtable process (Fall 1996) further review of the issues was completed and initial brainstorming of possible solutions occurred.

The issue areas can be categorized as:

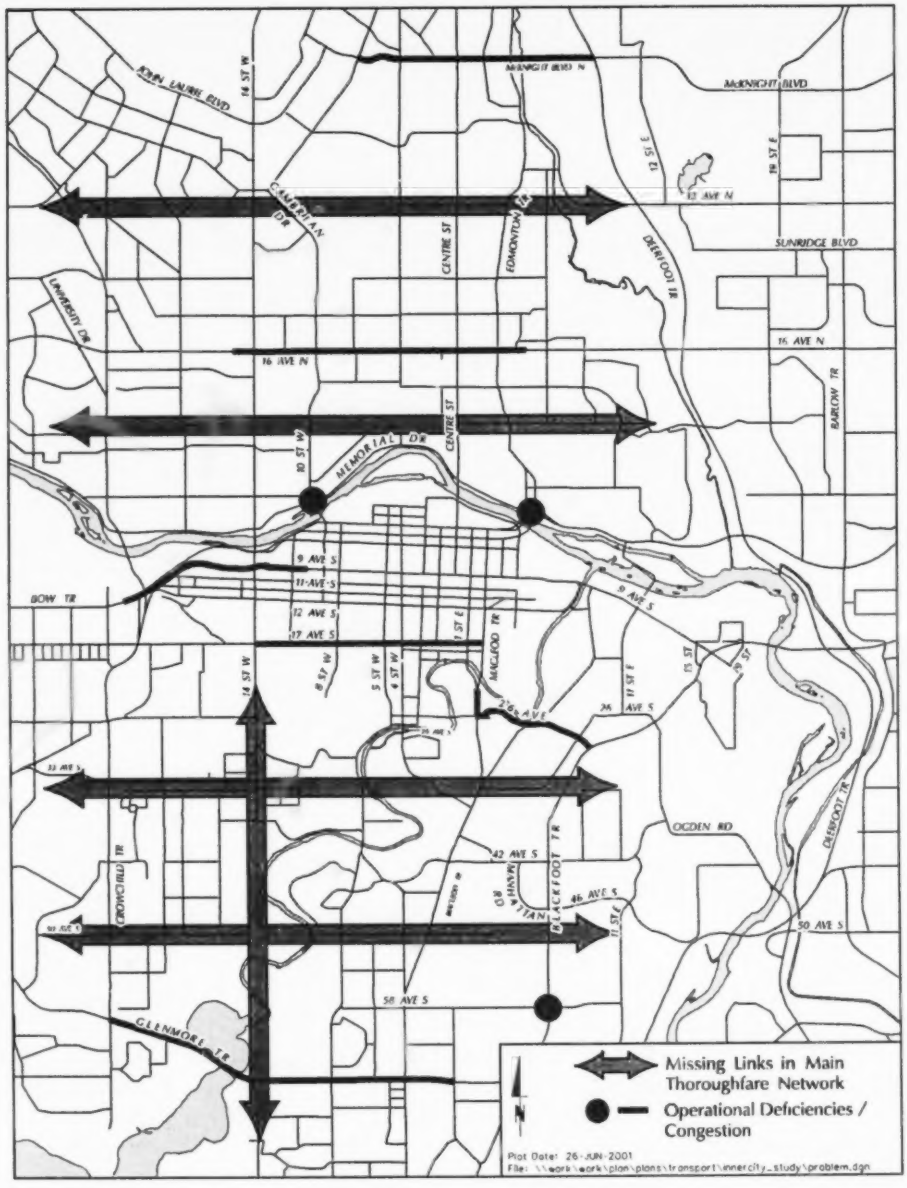
(a) preservation of community and environmental quality;
(b) retaining viable business/commercial areas;
(c) cycling and pedestrian system deficiencies;
(d) Downtown access and movements;
(e) implementation of transit priorities identified in the CTP;
(f) transit operational problems;
(g) existing roadway network deficiencies.

Calgary's transportation system is based on a hierarchical system, with the main thoroughfares (freeways, expressways, and major roads) being developed on a one mile grid system. Crosstown and Inner City traffic problems commonly occur due to missing links or deficiencies in this road pattern. The map (Key Problem Routes) illustrated the challenges for this study in identifying a network of routes that will continue to serve the Inner City and Downtown in the future as the city's growth continues. These current deficiencies have led to lesser roads performing a network role and traffic short-cutting through communities.

In looking for a better network for Inner City travel, it is recognized that transit must play an increasingly important role and the main traffic routes must work well, for traffic to be encouraged to use these routes in preference to lesser roads. Inherent in this philosophy for the main routes is the need to operate traffic control devices to maximize flow in these corridors, limit on-street parking and look for opportunities to eliminate local bottlenecks.

"Key" Problem Routes (Identified in stakeholder discussions)

'Key' Problem Routes



The ICTS approach to mobility issues gets its direction from the CTP. This means that no new Bow or Elbow River crossing will be built in the next thirty years and that the "skeletal" roads (16 Avenue N, Crowchild Trail, Glenmore Trail and Deerfoot Trail) will be expanded as the need arises and funding becomes available.

Calgary Transit already plays a very important role in serving travel needs to and from the Downtown and Inner City. The CTP is predicated on this role being much more important in the future - virtually all of the growth in travel to the Downtown must be accommodated by increased use of transit and car-pooling. To achieve this Calgary Transit will need to provide a higher level of service. This study has endeavoured to find solutions to current bus operational problem locations and identifying specific transit priority measures (e.g., bus/car pool lanes) that will assist them in increasing ridership and achieving CTP objectives.

Also, no major road widening into the Downtown is planned, consequently, taking existing road space and dedicating traffic lanes in some corridors to transit and car pooling may result in loss of auto capacity on the routes. However, opportunities have been identified to improve access / egress to the Downtown for all travel modes (auto, transit, walk and cycle). Some can be achieved in the short to medium term, e.g. upgrading a pedestrian environment on Louise Bridge, others will emerge over time (e.g., as major upgrade / rehabilitation of Bow River bridges becomes necessary).

Business, community and general public input to the study has been emphatic about the need to balance the needs of Calgarian's mobility with the preservation of established communities, the Downtown commercial core and surrounding business districts. With the growth forecasted for Calgary, it is unreasonable to expect that traffic volumes will decline in the Inner City area. However, the ICTS has attempted to identify appropriate infrastructure and operational improvements and traffic calming measures that can be considered through local traffic studies, that can mitigate the impacts of through and commuter traffic.

Principles

The Inner City Transportation action strategy will strive to achieve an equitable balance between community integrity and safe and reasonable mobility in the inner city.

The Inner City Transportation Action Strategy will be guided by the following principles:

(a) The safety, integrity and health of communities must be a priority in all local, and city-wide transportation matters. The quality of life in communities is of primary concern and must not be further compromised by the negative effects of vehicular traffic.

(b) It is not in the long term best interest of the City to jeopardize the quality of life for Inner City and Downtown residents, business and cultural communities by attempting to provide ever increasing auto access into and out of the Downtown.

(c) The Inner City Transportation System Management Strategy must support the key policies of the CTP. The quality of life in our communities requires an acceleration of those parts of the plan which deal with public transportation solutions.

(d) The capacity of the existing arterial road network within the Inner City should not be expanded through major roadway construction (except for Skeletal Network Improvements as identified in CTP), rather, through increased efficiencies being achieved through operational changes.

(e) The redefinition of roads and road descriptions must be used as a vehicle to implement the CTP balanced triangle to reduce traffic volumes to sustainable levels. In particular, future skeletal road network upgrades should serve to address specific stress points in the inner city. The long-term focus should be on traffic reduction, not merely traffic diversion.

(f) Land use and development decisions in both the inner city and suburban locations, based on CTP's goals, must become a priority in reducing automobile dependency.

(g) Priority must be directed to transportation funding. One critical aspect is to alleviate inappropriate traffic volumes on roads in the inner city by improving the major corridors of the main skeletal network identified in the CTP, the major streets, and our public transportation systems.

(h) All Calgarians must be made aware of the negative effects of traffic on communities. A comprehensive ongoing campaign to change behaviours is critical if the CTP is to be effective.

(i) That pedestrian and cycling opportunities be developed to provide a more attractive travel option.

5.0 THE NETWORK

Taking these principles the study has then looked at all aspects of Inner City travel paying particular attention to the following:

- understanding the needs of inner city communities and business areas;
- understanding the role and function of existing roads;
- considering all of the issues identified;
- recognizing the tension between inner city community, integrity and broader city mobility needs and the requirement to balance these needs;
- recognizing opportunities and constraints;
- recognizing that the City's hierarchical road classification system (i.e., freeways, expressways, major roads, collector streets, etc.), developed for new growth areas, is not appropriate for the retrofit of an Inner City area that was developed primarily on a grid or modified grid street system;
- the need to build in the aspirational changes of CTP (e.g., transit service).

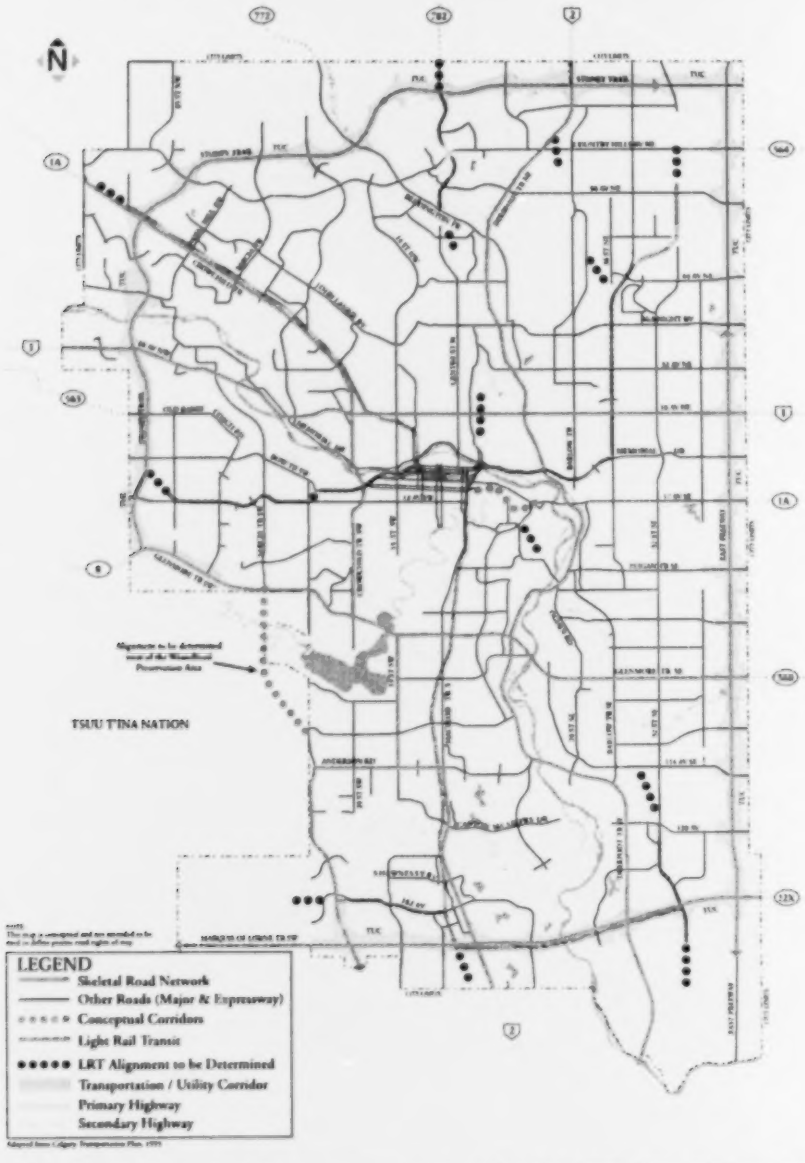
The study process has chosen to examine these elements by looking at existing and historic data, current role and function, relevant issues identified and discussed, and potential changes / improvements identified. As noted in the Issue section of this paper, the assumptions for the future include no new river crossings and an Inner City roadway system that has little added capacity, growth in travel will be accommodated mostly by increased transit usage, to a lesser extent through improved efficiencies in operating the existing roadway system, and by improving conditions for walking and cycling.

Based on an understanding of the current status, a future role and function for each roadway under consideration and possible changes to the roadway and transit systems was identified.

From this exercise, the following pages summarize:

- the main routes that serve all Inner City and Downtown travel;
- the roads that provide a supporting and/or connecting role between local and community land uses;
- transit measures that will be necessary to attain long-term ridership objectives;
- suggested roadway changes that will relieve existing bottlenecks, and improve operational safety changes which will provide a more compatible streetscape/environment to adjacent land uses;
- improvements to Downtown access/egress and movement within the Downtown (including cycling and walking modes).

5.1 Skeletal Road Network



In the development of the roadway system for the CTP, the primary grid of travel corridors for the City was termed the "Skeletal Road Network". For the Inner City, 16 Avenue N forms part of this system, and is assumed to be upgraded to a 6-lane divided roadway within the next 30 years. On the periphery of the Inner City area; Glenmore Trail, Crowchild Trail and Deerfoot Trail are assumed to be significantly upgraded (including their widening and / or grade-separation of existing signalized intersections, as required).

5.2a Main Roads (within the study area)

Beneath the skeletal system, existing travel routes (such as Macleod Trail and Centre Street N) serve to connect to these roads or act as important distributors for our daily travel (work trips, shopping trips, school trips, recreational trips, movement of goods and services, etc.)

The main routes (i.e., Major Roads and Secondary Routes) serving the Inner City area and the Downtown are shown on the map. In accordance the ICTS process and the CTP, the strategy has recognized the need to maintain the integrity of these routes to protect surrounding communities and ensure the future mobility of all Calgarians.

Typically, the main routes serve local demands and a fairly high level of through traffic needs, usually as a continuous route, moving traffic between various areas of the city. They often serve as mainline bus corridors, and may also include crossings of watercourses or railroads, provide access to major developments, serve as truck routes, and parking may be prohibited or regulated. The ICTS strategy recognized the importance of retaining effective operation of these roadways, and the need to encourage their continued use as the main arteries to minimize the desire for short-cutting through adjacent communities on residential roads.

The following measures are seen as generally appropriate strategies to pursue in the future to ensure the best operation of the main routes:

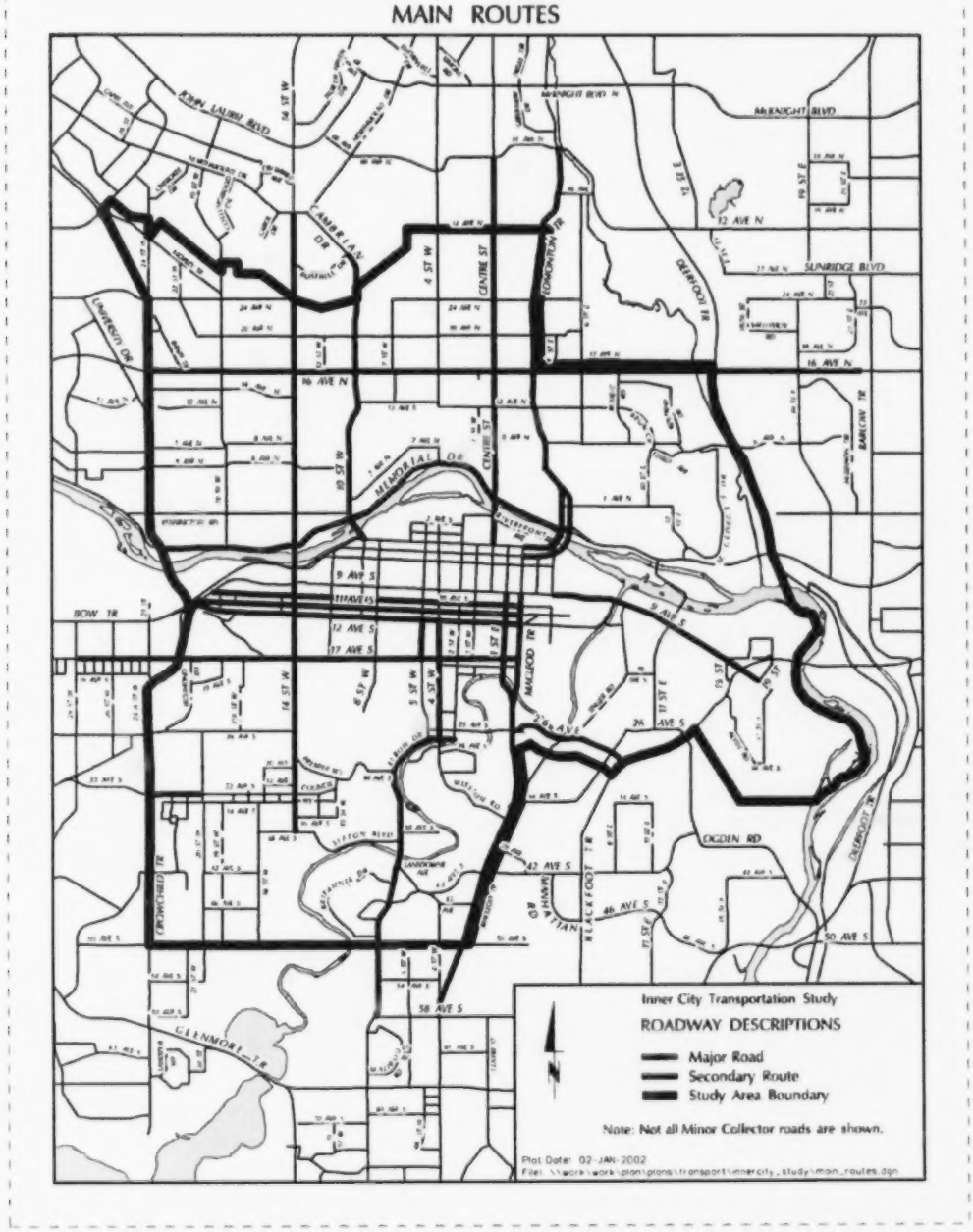
- ensure that traffic control devices optimize traffic flow along the major route;
- identify locations where obtaining the bylaw setbacks would permit the elimination of operational deficiencies/bottlenecks, particularly transit related problems;
- do not encourage more on-street parking due to the impact on roadway capacity, transit service and safety.

Supporting Collector Roads

In addition to the main routes, the Inner City road network is heavily reliant on a number of other roads which provide support to the main routes by virtue of connecting to or being a continuation of the main routes. Like the main routes, these roadways also serve a mix of through and local traffic needs, but typically have a lower proportion of through traffic. These roads distribute local traffic from adjacent communities and employment / commercial uses to the main routes. They often serve or can serve as transit routes, have lower daily traffic volumes than the main routes and frequently have regulated on-street parking.

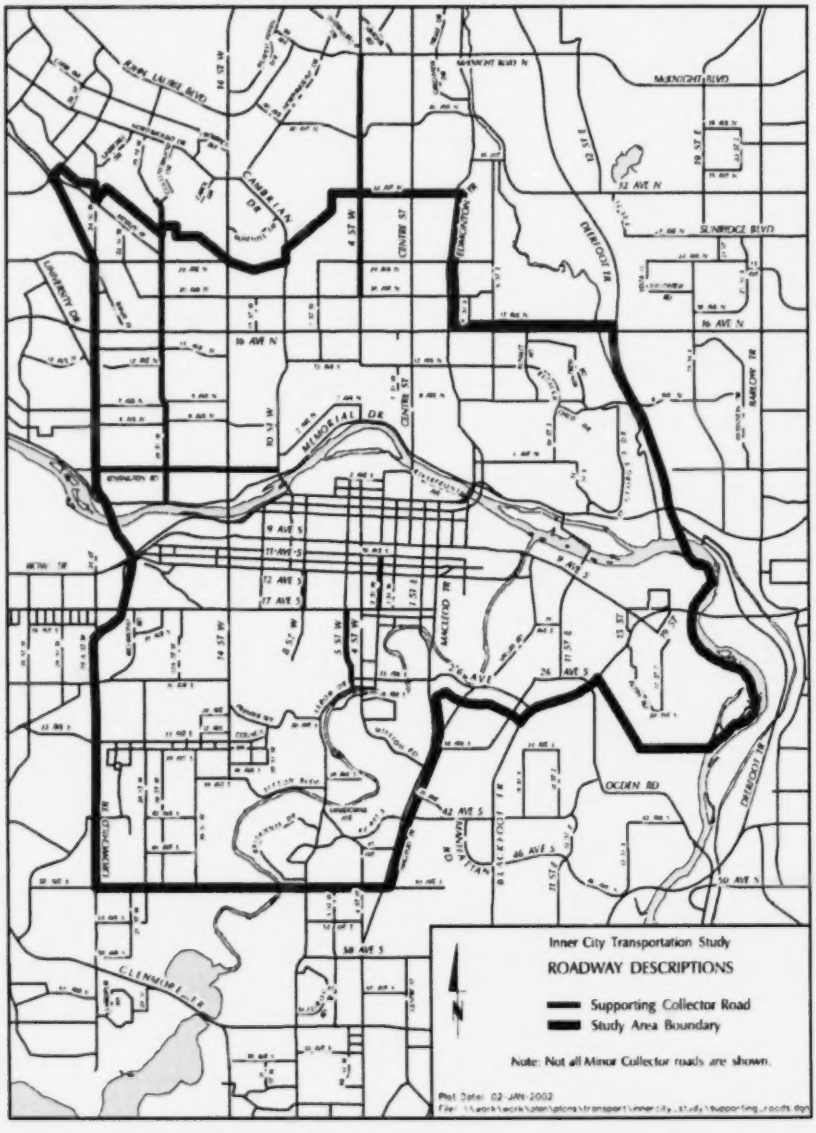
Whereas the main routes have a primary role to move traffic, the supporting collector roads typically balance this role with the need to provide access to local land uses. In the Inner City many of the supporting roads carry daily

5.2a Main Roads (within the study area)



5.2b Supporting Collector Roads (within the study area)

SUPPORTING COLLECTOR ROADS



traffic volumes in excess of 10,000 vehicles per day. It is unrealistic to expect traffic volumes on many of these routes to decline in the future, given the forecast of significant city-wide growth. The CTP foresees no new additional roadway capacity to handle this growth. The existing available road network will need to be maintained, but many of the new travel trips are assumed to be made by transit.

High volumes on some of the supporting collector roads can be attributed to capacity constraints and congestion on parallel main routes. For example, Northmount Drive / 40 Avenue N due to congestion on McKnight Boulevard; and 12, 20 and 24 Avenue N due to congestion on 16 Avenue N. In the long term, upgrades to these main routes should trigger the concurrent implementation of aggressive traffic measures to reduce through traffic on these roads.

High traffic volumes on some supporting collector roads are due to missing network roadway links. This is particularly applicable to the east / west route comprising 33 Avenue S / Sifton Boulevard / Lansdowne Avenue / 42 Avenue S – where the lack of a continuous route (providing an Elbow River crossing) between the Downtown and Glenmore Trail is significant. Notwithstanding the above, it is important to understand that today the majority of the trips using these roads are internal and originate east of Crowchild Trail.

NOTE: Council changed the description of 33 Avenue South and Sifton Boulevard to that of Mirror Collector with qualification as follows:

> "...that traffic integration measures be directed to reduce volume and speed and not to be implemented to change the role and function..."

Council Amendment

ii) By the addition of the following words after the words "inner City Transportation System Management Strategy (Attachment 1)":

"That more aggressive traffic control/calming measures to address volume and speed, such as 4-way stops be considered on an experimental or pilot basis for certain Supporting Collector Roads where:

a) a thorough community consultation process, undertaken with Administration, indicates that such a measure has support of the local communities, and has the likelihood of being successfully implemented, i.e. without negative impact on adjacent communities;

b) that the proposed experiment or pilot measure be brought to the S.P.C. on Transportation, Transit and Parking for endorsement prior to implementation;

c) ***that the measure proceed for a period of up to six months after which a report will be presented to the S.P.C. on Transportation, Transit and Parking with the results and an evaluation of the experiment or pilot, including community input;"***

Based on all of this work and public input and with the assistance of the Independent Technical review panel a classification table for Inner City Roadways has been developed.

The table categorizes different types of roadways found in the Inner City varying from Major Roads to Local roads. For each roadway it describes.

Characteristic	Local		Minor Collector		Supporting Collector Road		Secondary Route		Major Street
	Residential	Commercial	Residential	Commercial	Residential	Commercial	Residential	Commercial	
Traffic Service Function	secondary	secondary	somewhat less than land service	somewhat less than land service	equal to land service	equal to land service	somewhat more than land service	somewhat more than land service	primary
Land Service Function	primary	primary	somewhat more than traffic service	somewhat more than traffic service	equal to traffic service	equal to traffic service	somewhat less than traffic service	somewhat less than traffic service	secondary
* Typical Traffic Volumes, vehicles per day	0 - 1,500	1,000 - 3,000	1,000 - 7,500	3,000 - 10,000	5,000 - 15,000	5,000 - 20,000	10,000 - 30,000	10,000 - 30,000	20,000 - 30,000*
Traffic speeds, posted km/h	40	40	40	40	40 to 50	50	40 to 50	50 to 60	50 to 70
Vehicle Types	autos	mixed[1]	autos	mixed[1]	mixed[1]	mixed[1]	mixed[1]	mixed[1]	all types
Percentage of Through Traffic	<15%	<15%	<30%	<30%	<50%	<50%	<75%	<75%	80%+
Transit Services	none	none	some	some	some	some	yes	yes	yes
Commuter Cyclist Activity[2]	low/no special facilities	low/no special facilities	low/no special facilities	low/no special facilities	encouraged/ on-street facilities	encouraged/ on-streetfacilit-ies	encouraged/ on-street orseparate facilities	encouraged/ on-street or separate facilities	discouraged/ separate facilities preferred
Pedestrian Crossing Activity/Control	low/no controls	medium/no controls	low to medium/ some controls	medium/some controls	medium/ crossings combined with traffic calming	high/crossings combined with traffic calming	medium/some restrictions and protection	medium/some restrictions and protection	low/restricted crossings

*Note: This column indicates typical volumes that could be expected on a road but does not mean that action will be taken to encourage traffic on sites that are below the maximums indicated.

Clarification

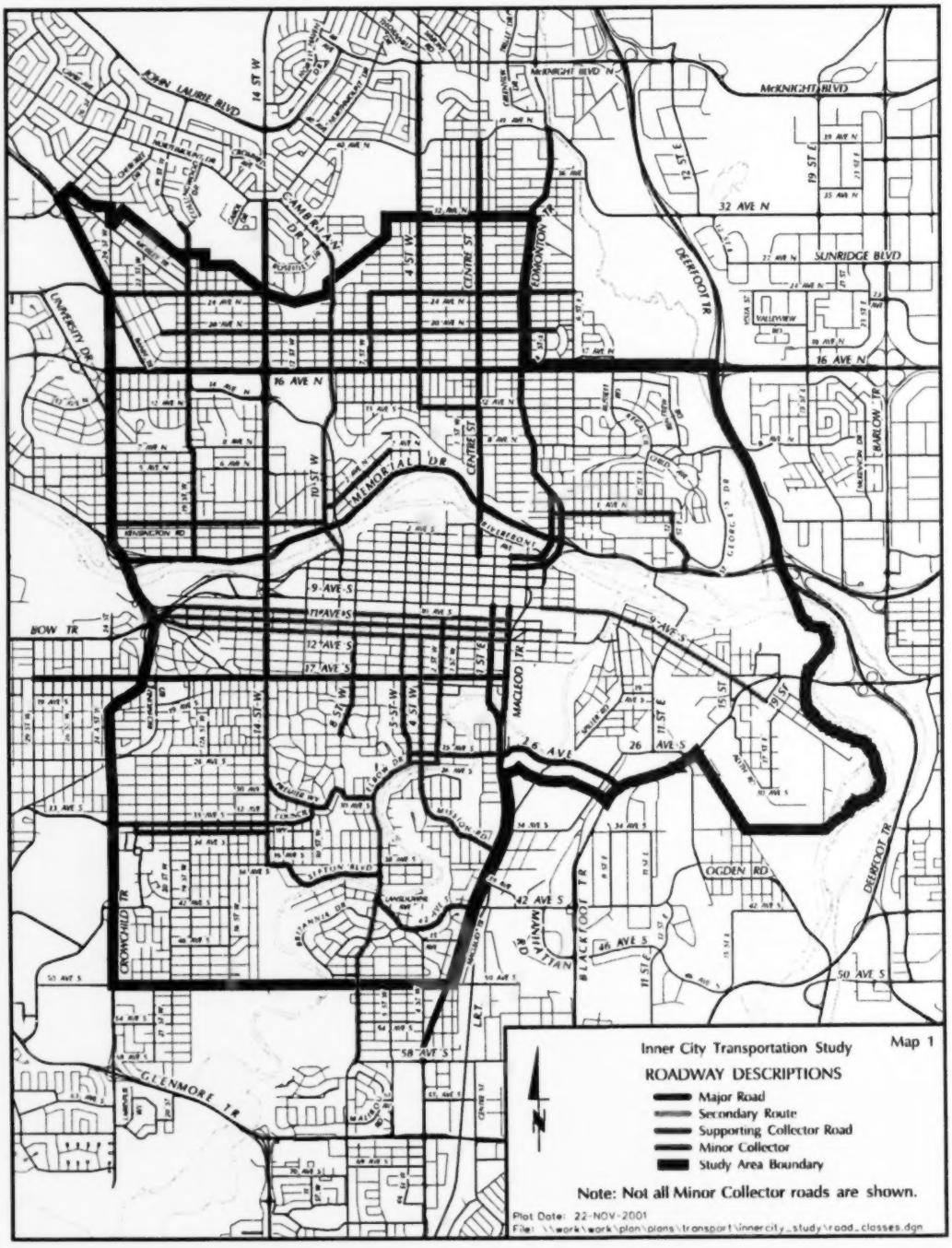
Notwithstanding the above, when Council approved the ICTSMS, it amended Map 1 (page 19) to acknowledge specific problematic corridors that due to major network deficiencies were undermining local Community & Environmental Quality. Many of the characteristics of the corridors are then inconsistent with the characteristics (i.e., role and function) associated with their description as Minor Collectors described in the Table above. Also this study focussed on specific problem corridors and therefore Map 1 only reflects those changes at this time. Through community traffic studies and other studies it is expected that changes to the remaining network will be forthcoming based on the ICTSMS.

It is not the intent of this descriptive framework that action will be taken to encourage or allow additional traffic on roads that are below the maximum indicated, with the exception of major roads (i.e. 16 Ave N, 14 St N, Centre St N, Edmonton Trail N, 17 Ave S, 26 Ave S and the Macleod Trail couplet). However, given current growth forecasts traffic volumes can be expected to increase throughout the inner city. The Table guidelines are intended to provide important benchmarks that can serve as indicators to trigger new and appropriate responses. The local process through which traffic calming is undertaken must therefore be inclusive, recognizing upstream and downstream impact and most important the need to explore different solutions through experimentation.

Characteristic	Local		Minor Collector		Supporting Collector Road		Secondary Route		Major Street
	Residential	Commercial	Residential	Commercial	Residential	Commercial	Residential	Commercial	
Parking Controls	no restrictions	no restrictions	no restrictions	turnover restrictions	may be peak period restrictions	may be peak period/turnover restrictions	peak period restrictions	peak period/ turnover restrictions	prohibited
Degree of Parking Activity (when not restricted)	low to moderate	moderate	low to moderate	moderate	low to moderate	moderate to high	low to moderate	high	n/a
Access Conditions	frequent, unrestricted	frequent, unrestricted	few restrictions	few restrictions	few restrictions	some controls	no direct access preferred	more vigorous controls	rigidly controlled
Typical Pavement widths, m	8 to 10	10	10 to 11	10 to 12	11 to 14	11 to 14	12 to 18	12 to 18	4 lane: 14.8+ 6 lane: 22.2+
Typical Building Setbacks	varies	varies	varies	varies	varies	zero to medium	varies	zero to medium	large
Traffic Control	stop or yield	stop or yield	stop or yield	stop or yield	pedestrian flashers, some stop, occasional signals	pedestrian flashers, some stop, occasional signals	restricted pedestrian crossings, traffic signals	traffic signals	traffic signals, grade separations
Traffic Calming Measures	as required	as required	as required	as required	selective to reduce speeds, manage volumes, protect pedestrians	selective to reduce speeds, manage volumes, protect pedestrians	isolated opportunities only, primarily pedestrian oriented	isolated opportunities only, primarily pedestrian oriented	None, except potential pedestrian crossing enhancement

1 Mixed is defined as autos, local delivery trucks, buses.
2 Cyclist activity may be higher if the street is designated as part of regional bikeway network.

This table has then be used to develop a heirachy of roads as shown on Map 1. In addition it will serve to guide City Council, The Administration and Communities in future actions relative to Inner City Transportation Issues. Examples of how such a table is applied to a particular road may be found in the Corridor Strategies Section 6.0 of this report.


Inner City Transportation Study
Map 1
ROADWAY DESCRIPTIONS
Major Road
Secondary Route
Supporting Collector Road
Minor Collector
Study Area Boundary
Note: Not all Minor Collector roads are shown.
Plot Date: 22-NOV-2001
File: \\work\work\plan\plans\transport\innercity_study\road_classes.dgn
JOHN LAURIE BLVD
14 ST W
CAMBRIAN DR
16 AVE N
32 AVE N
SUNRIDGE BLVD
McKNIGHT BLVD
DEERFOOT TR
EDMONTON TR
CENTRE ST
MEMORIAL DR
BOW TR
9 AVE S
11 AVE S
12 AVE S
17 AVE S
MACLEOD TR
26 AVE S
42 AVE S
50 AVE S
58 AVE S
OGDEN RD
CROWCHILD TR
GLENMORE TR
BLACKFOOT TR
MACLEAN DR
LAKE BONAVISTA DR
BARLOW TR

Implementation Action Plan

The study process has identified a number of transportation infrastructure projects and new transit priorities that should be implemented over the next decade to protect and enhance Inner City communities, and maintain quality travel choices for Calgarians who use the Inner City and Downtown transportation systems.

The projects included in this Discussion Paper cover:

- road changes that enhance mobility and circulation and relieve bottlenecks and congestion points
- improvements to transit operations
- road changes to improve safety
- improvements for pedestrians and cyclists
- community streetscape/plans traffic calming plans

Council approved a Transportation Infrastructure Improvement Plan which allocates $16 million for inner city projects over the period 2000-2005. The projects identified through this process are intended to benefit the residents and business interest throughout the Inner City, Downtown and the City at large.

1. Roadway Improvements Suggested

The following improvements will facilitate the flow of traffic on the major road system.

16 Avenue N (14 Street NW - 6 Street NE)	• upgrade to 6-lanes (HIGH PRIORITY)
McKnight Boulevard (4 Street NW - Deerfoot Trail)	• upgrade to 5 lanes (with lane reversal or 6-lanes)
14 Street SW/Bow Trail/ 5 Avenue SW/ 6 Avenue SW	• improve western access to Downtown
14 Street SW/Memorial Drive	• new link road, new signals, all turns provided
Macleod Trail/25 Avenue SE	• increased capacity for through & turn moves
Blackfoot Trail/25 Avenue SE	• new traffic intersection, CP overpass; increased capacity for through & turn moves
14 Street SW (10 Avenue SW - 13 Avenue SW)	• widen to west & building left turn bays

Conversion of 1 Way Systems to 2 Way Operation

The study has shown that the conversion of existing one-way streets to two-way operation offers potential advantages particularly from a land use, community environment and local circulation pattern perspectives. The rationale for each change is documented in the appropriate corridor study and the following table indicates the status of each proposal at this time.

1-Way to 2-Way Street Conversions Suggested

2 Street SW (10 Avenue SW - 26 Avenue SW)
25 and 26 Avenue SW (2 Street SW - 4 Street SW)
5 Street SW (17 Avenue SW - 26 Avenue SW)

11 and 12 Avenue SW (19 Street SW - 4 Street SE)

(**Note**: See Corridor Strategies.)

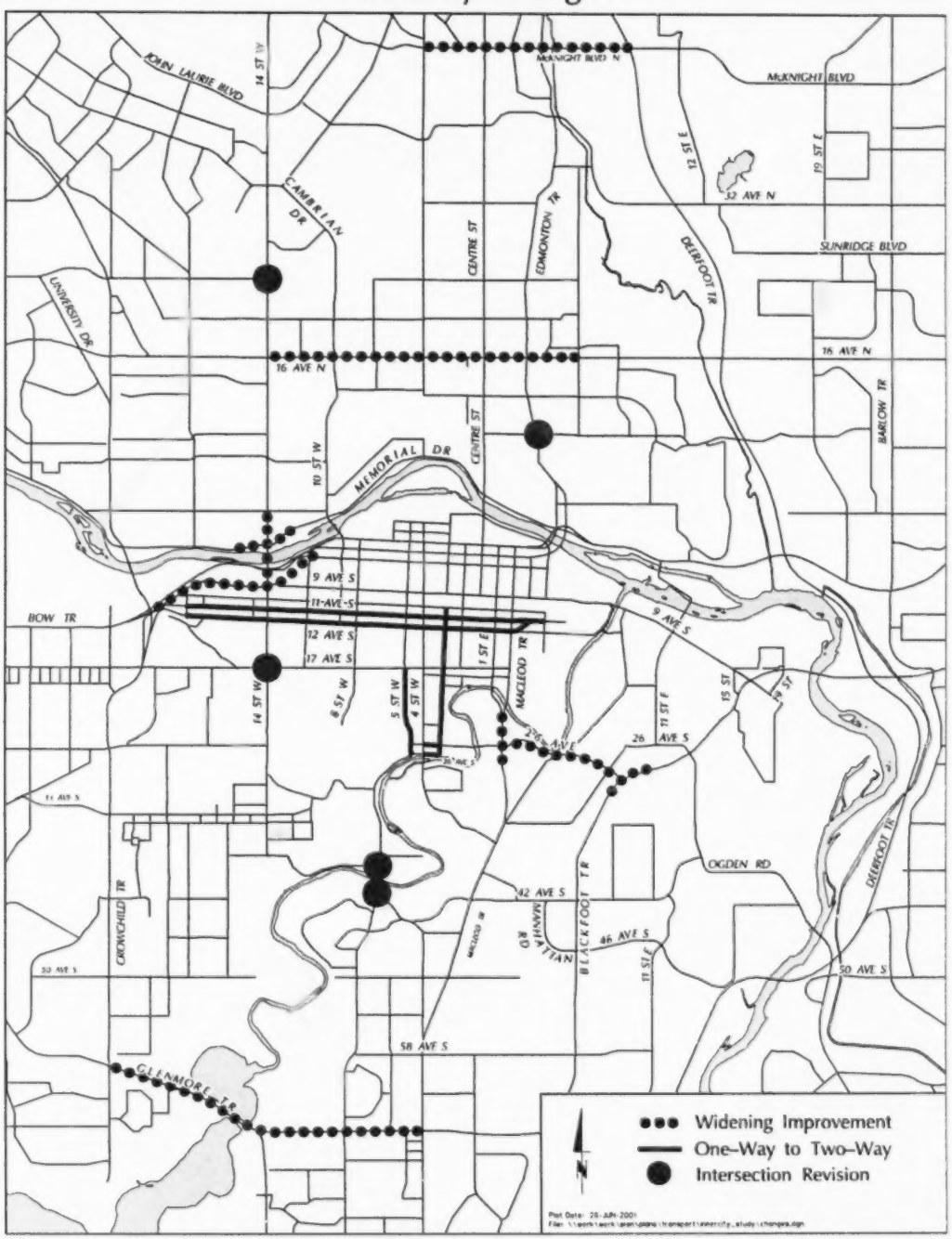
2. Existing Traffic Intersections - Changes Suggested

The following changes in existing intersections will improve safety or assist in transit operations on these routes.

Elbow Drive/Lansdowne Avenue	• safety improvement
Elbow Drive/Sifton Boulevard	• safety improvemen
14 Street NW/24 Avenue NW	• left turn vehicle storage
Edmonton Trail/8 Avenue NE	• left turn vehicle storage
17 Avenue SW/14 Street SW	• revise existing signals/traffic lanes

5.3 Road Changes

Roadway Changes



5.4 Transit Measures

Calgary Transit provides a high level of transit service through the Inner City and to the Downtown. Today its share of the peak hour Downtown travel is about 40%. Forecasts used in developing the 30 year plan (CTP) show only a small increase in the number of vehicles going Downtown, due to increased use of transit and carpooling.

Trips to Downtown (a.m. Peak Hour)		
	Transit Trips	**Vehicle Trip**
Today	14,000	20,000
Forecast at 1:25M	24,000	21,000
In addition: some 7,000 commuters carpool and 3,000 walk or cycle into the Downtown.		

The table shows the current and long-term travel forecasts.

To achieve these forecasts will require a continued investment in Calgary Transit's service over the next 30 years, by which time up to 40% more service will need to be provided. It will also require that Downtown parking supply is carefully managed.

These aspirations, and the CTP land use policies are seen as key to protecting the health and vibrance of Downtown and Inner City communities and businesses.

These future travel assumptions pose a challenge to Calgary Transit to deliver the quality and frequency of service needed to meet the long-term goals for retaining good Downtown access from established and new communities across the City.

The ICTS process has worked with Calgary Transit to identify existing operational problem locations in the Inner City and the Downtown. In addition, specific proposals have been identified for transit priorities which will improve bus services in the Inner City areas and on the approaches to Downtown. These are shown on the map.

Over time the increased transit service from the North, Northwest, West, and Southwest sectors will require peak period bus-only lanes to be introduced. Upon the conversion of these traffic lanes, car pool autos may be permitted to use them until such time that exclusive transit use is required. Some loss of auto capacity in these corridors may occur as a result of this higher transit emphasis. Parallel major roads may need to carry higher auto volumes. Example: Centre Street N and 10 Street W transit priorities may cause some auto trips to divert to Edmonton Trail and 14 Street W.

At the network level, the introduction of new signal controls at existing intersections capable of giving priority to transit will be implemented over time. Over 100 locations have been identified to date, and will provide improved bus route speeds. Car users will also benefit from these controls.

Inner City
Transit Changes and Improvement

North Calgary	Centre Street N (20 Avenue N - 2 Avenue S)	• extend lane reversal, with bus-only lane in curb lane	(a.m. peak)
NW Calgary	10 Street NW (5 Avenue N - 4 Avenue S)	• extend lane reversal, with bus-only lane in curb lane	(a.m. peak)
NW Calgary	10 Street NW (4 Avenue S - Memorial Drive)	• bus only lane in existing curb lane	(p.m. peak)
West & SW Calgary	Bow Trail/9 Avenue S (Crowchild Trail - 14 Street W)	• bus-only lane in existing and revised curb lane	(all day)
SW Calgary	Crowchild Trail (17 Avenue S - Bow Trail)	• bus-only lane in existing & widened shoulder	(all day)
SW Calgary	4 Street SW (17 Avenue S - 4 Avenue S)	• lane reversal with bus-only lane in curb lane	(a.m. peak)

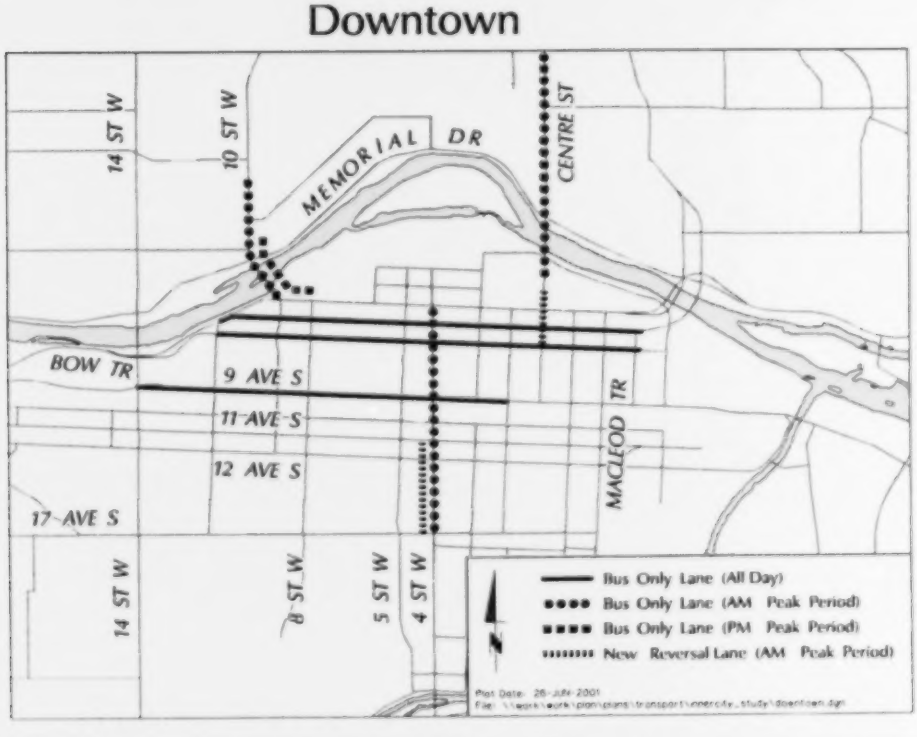
Transit Measures

Existing Traffic Intersections - Changes Suggested

17 Avenue SW/1 Street SW	• E>N turn priority to reduce route delays
17 Avenue SW/8 Street SW	• E>N turn priority to reduce route delays
Various Inner City locations (approx. 100) - phased in over time	• improve technology/signal controllers will be capable of providing transit priority and improved auto progression

Downtown Transit Changes and Improvements

LRT - 7th Avenue S & 9 Street W operation	• traffic signal control changes to optimize train progression through the Downtown
5 Avenue S & 6 Avenue S (11 Street W - Macleod Trail)	• existing curb lane to be bus-only when warranted by service levels
9 Avenue S (14 Street W - 1 Street W)	• existing curb lane to be bus-only when west access to Downtown is improved (i.e. Bow Trail & 14 Street W)
Centre Street N (20 Avenue N - 2 Avenue S)	• existing curb lane to be bus-only in a.m. peak period. In Downtown, buses to access 4 Avenue S and 6 Avenue S via 2 Avenue S and 1 Street W
4 Street W (17 Avenue S - 4 Avenue S)	• existing curb lane to be bus-only in a.m. peak period
4 Avenue S (8 Street W - 9 Street W)	• existing curb lane to be bus-only in p.m. peak period
Various intersection	• revisions to assist bus progression



5.5 Cycling & Pedestrians

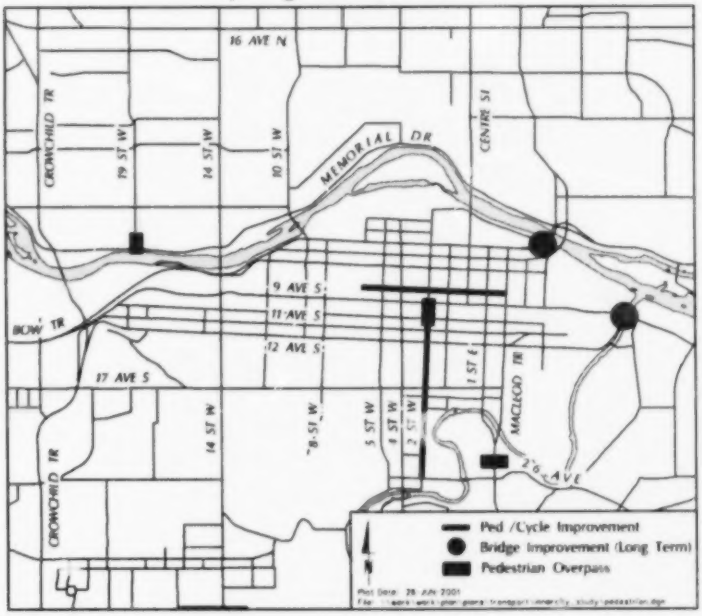
The study process has revealed some opportunities to improve cycle and pedestrian access within the City. A separate study has been completed and identifies cycle corridors and makes recommendations on a cycle route network serving the South Inner City (Calgary Pathway & Bikeway Plan, May 2000).

Cycle & Pedestrian Changes Suggested

The following proposals have been forwarded to the Cycle Plan process for consideration.

Memorial Drive/19 Street W	• pedestrian overpass
Macleod Trail/24 Avenue S	• new pedestrian overpass
2 Street W (10 Avenue S - 9 Avenue S)	• new pedestrian overpass over CPR tracks
2 Street W (26 Avenue S - 9 Avenue S)	• potential cycle route to Downtown
Stephens Avenue Mall	• permit cycling during low pedestrian usage times
9 Avenue S (Elbow River bridge)	• long term - widen for non-auto modes when replaced
Edmonton Trail (Bow River bridge)	• long term - widen for non-auto modes when required

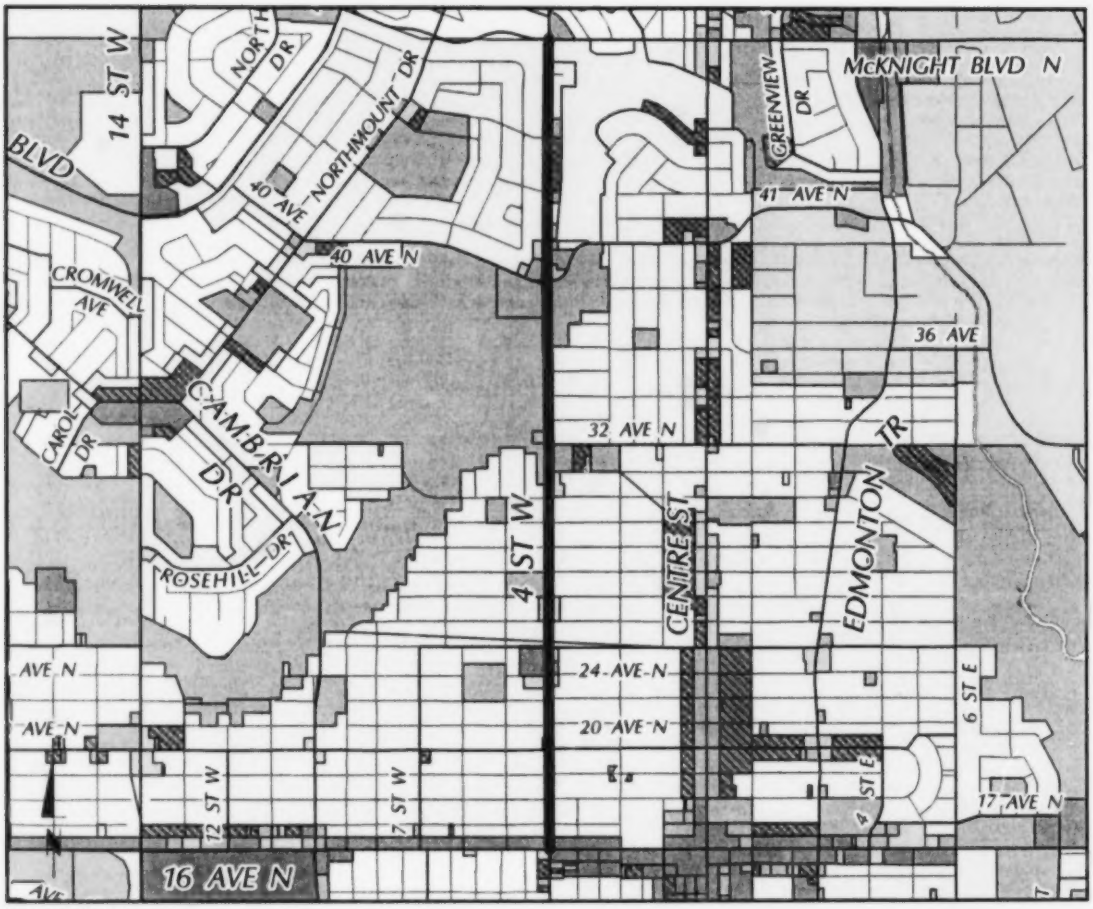
Cycling and Pedestrians



Inner City Transportation Study

4 St NW

Between 16 Av NW and McKnight Bv NW



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6.0 CORRIDOR STRATEGIES

Having established the overall management strategy for roads in the Inner City it is appropriate to translate these principles into strategies for individual corridors.

The following pages outlines corridor strategies for six of the corridors. These were the most controversial corridors in the work of the ICTS Round Table and were the subject of detailed review by the Independent Technical Panel.

Following approval of this document by Council, it is the Administration's intent to produce similar strategies for other corridors.

4 Street North between 16 Avenue and McKnight Boulevard NW

Land Use And Planning Context

This road serves a variety of inner city, inner suburban and established communities throughout the north sector of the city. Virtually the entire frontage is low density residential with some local commercial activities at the junction of 16 Avenue NW and 24 Avenue NW, between 32 Avenue NW and 40 Avenue NW, Queen's Park Cemetery dominates the western frontage.

Mobility

The road network in the north inner city is more robust and consistent than the south inner city particularly in a north/south direction. Crowchild Trail, 19 Street, 14 Street, Centre Street and Edmonton Trail provide attractive choices to and from the Downtown. The primary role and function of this road is as a residential collector for the many communities that it serves between 16 Avenue NW and Beddington Trail NW which also contributes to the daily volumes being higher than a more typical collector road (1998- 11,000 vehicles/day). Fourth Street NW may also provide an alternate route for commuters if Centre Street is overly congested. It is presently a designated truck route, which is intended to serve all the adjacent communities and therefore minimize the impact of truck traffic infiltration throughout the broader community on local streets.

Balancing The Triangle

Growth pressures, the extent of this corridor, driver behaviour and the very direct opportunity 4th Street NW affords adjacent communities and other commuters must be taken into account in developing the design and operating strategy for this corridor. This is clearly a residential corridor, which makes it inherently less resilient to the effects of excessive volumes but more so to unsafe driver behaviour. Other network roads identified above can adequately serve the system needs and 4 Street NW should serve a lesser role.

Summary

To deal with these issues, a series of actions including a review of the truck route designation, implementation of streetscape and traffic calming measures and the changes at 4 Street and 16 Avenue NW are proposed.

Recommendation

1. That 4 Street NW between 16 Avenue NW and McKnight Boulevard NW be described as a "Supporting Collector Road".

2. That the current truck route designation remain and further that the affected communities and trucking stakeholders be engaged in a consultation process prior to changing the designation.

3. That a streetscape planning and design exercise be commenced in accordance with the Action Plan.

4. That the following recommendations of the Technical Review Panel be referred to the Streetscape Design Committee to provide guidance in developing the plan:

    a. That traffic calming measure be implemented on 4 Street North at:

        - 40 Avenue North
        - 24 Avenue North
        - 25 Avenue North

    b. That traffic calming measures be implemented on 4 Street North just south of McKnight Boulevard to give motorists the impression that this is not a high-speed road and that the speed limit is 50 km/h.

    c. That the regional bikeway on 4 Street, north of 40 Avenue North, be redesigned to provide a more continuous routing. One option is a painted shoulder lane where there is adequate cross-sectional width.

5. That the intersection of 4 Street and 16 Avenue North have opposing left turn lanes. This will eliminate southbound traffic on 4 Street from using the left turn lane as a through lane. This is one option; another would be the use of median barriers.

6. That on-street parking be permitted in non-peak times, and in peak times in those areas where the cross-section can accommodate four lanes plus parking. This would assist in areas where there is a shortage of off-street parking. It would also act as a traffic calming measure.

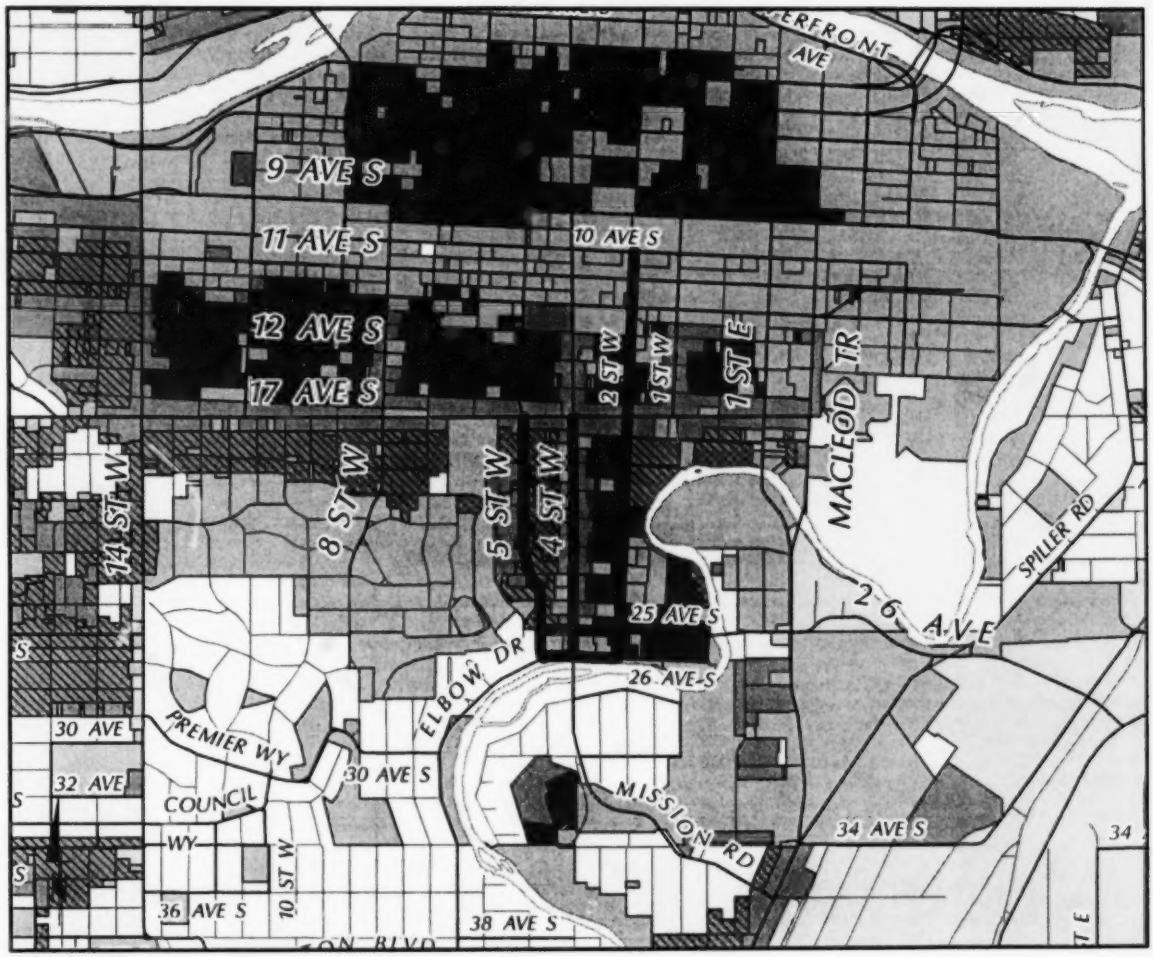
7. That the City and the community embrace an ongoing commitment to establish and maintain a balance between community quality of life and safe and acceptable mobility for road uses.

8. That the description of 12 Avenue N. and 4 Street W., south of 16 Avenue change from supporting roadway to minor collector, and further that traffic mitigation measures be directed to reduce the volume and speed and not to be implemented to change the roll and function of 4 Street W., south of 6 Avenue.

Inner City Transportation Study

2 St SW, 4 St SW, 5 St SW

25 & 26 Av SW



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2, 4 and 5 Streets
25 and 26 Avenues

Land Use And Planning Context

These three closely aligned parallel corridors serve three distinct but inter-related environments. The 4 Street commercial (BRZ) area provides the interface between the communities of Mission and Cliff Bungalow now commonly and formally known as Mission Cliff Bungalow community. Fourth Street has evolved into a very successful urban business district with a healthy active and diverse business community. The Mission district to the east and Cliff Bungalow to the west are older evolving eclectic medium density residential communities providing a substantial and desirable mix of housing type and tenure choices. Redevelopment in the Mission area has taken the form of high-density high rise along the Elbow River, whereas redevelopment in Cliff Bungalow has taken the form of reinvestment and more modest redevelopment.

Mobility

Historically, 2 Street and 5 Street were two-way local collector roads with a primary purpose of serving their respective medium density communities. In 1979, the Inner City Plan affirmed this land use role, however, during the same period, in conjunction with the construction of the 5 Street under pass at 9 and 10 Avenues, the conversion from two-way to one-way was introduced and has been in place ever since.

The proposal is to return both streets to two-way operation – 5 Street from 17 Avenue south to Elbow Drive and 2 Street from 10 Avenue to 26 Avenue. In conjunction with these changes, 25 and 26 Avenues will revert to two-way operation between 2 and 4 Streets.

The analysis demonstrates that from a network perspective, the existing one-way operation provides no greater network mobility benefit that will the proposed return to a two-way operation. In fact, the conversion of 5 Street to two-way results in higher daily volumes than does the existing one-way, this is the result of 5 Street as a two-way serving both peak periods. The same is not true for 2 Street because 2 Street is discontinuous at 10 Avenue south. Today 5 Street daily volumes are in the order of 14,000 vehicles/day whereas 2 Street is in the order of 5,000 vehicles/day.

In addition, 2 Street has been identified through the ICTS process as an ideal cycle route connection between the Elbow River regional system and the downtown. Conversion to two-way with a designated cycle corridor creates a safe environment for a necessary cycle connection.

Balancing The Triangle

From a network mobility perspective, the analysis indicates that the conversion of 2 Street, 5 Street, 25 and 26 Avenues back to two-way is a readily feasible and implementable proposition. From a local community mobility and circulation perspective, the proposed conversion is feasible and desirable (i.e. it improves local circulation, and thereby reduces the length of some local movements). From a community planning perspective, the conversion particularly of 5 Street back to two-way will create a much safer environment. The re-establishment of more normal street conditions in these adjoining higher density communities may also create a more favourable investment environment which is consistent with Councils' strategic objectives, is supportive of the business community objectives, (i.e. ease of access and circulation) and is consistent as well with the communities approved objectives.

Summary

To better achieve community planning mobility objectives and restore a better quality of life, the conversion of all of these roads back to two-way is proposed and should be accomplished in 2001.

Recommendation

1. That the Administration be instructed to implement the conversion of 2 Street (between 10 Avenue South and 26 Avenue South), 5 Street (between 17 Avenue South and Elbow Drive), 25 and 26 Avenues back to a two-way operation commencing in 2001.

2. That:

   - 2 Street west between 10 Avenue and 26 Avenue be described as a minor collector road.
   - 5 Street west between 17 Avenue and 26 Avenue be described as a supporting road.
   - 4 Street west between 26 Avenue and 10 Avenue be described as a Secondary Route.
   - That 25 and 26 Avenue be described as minor collector roads.

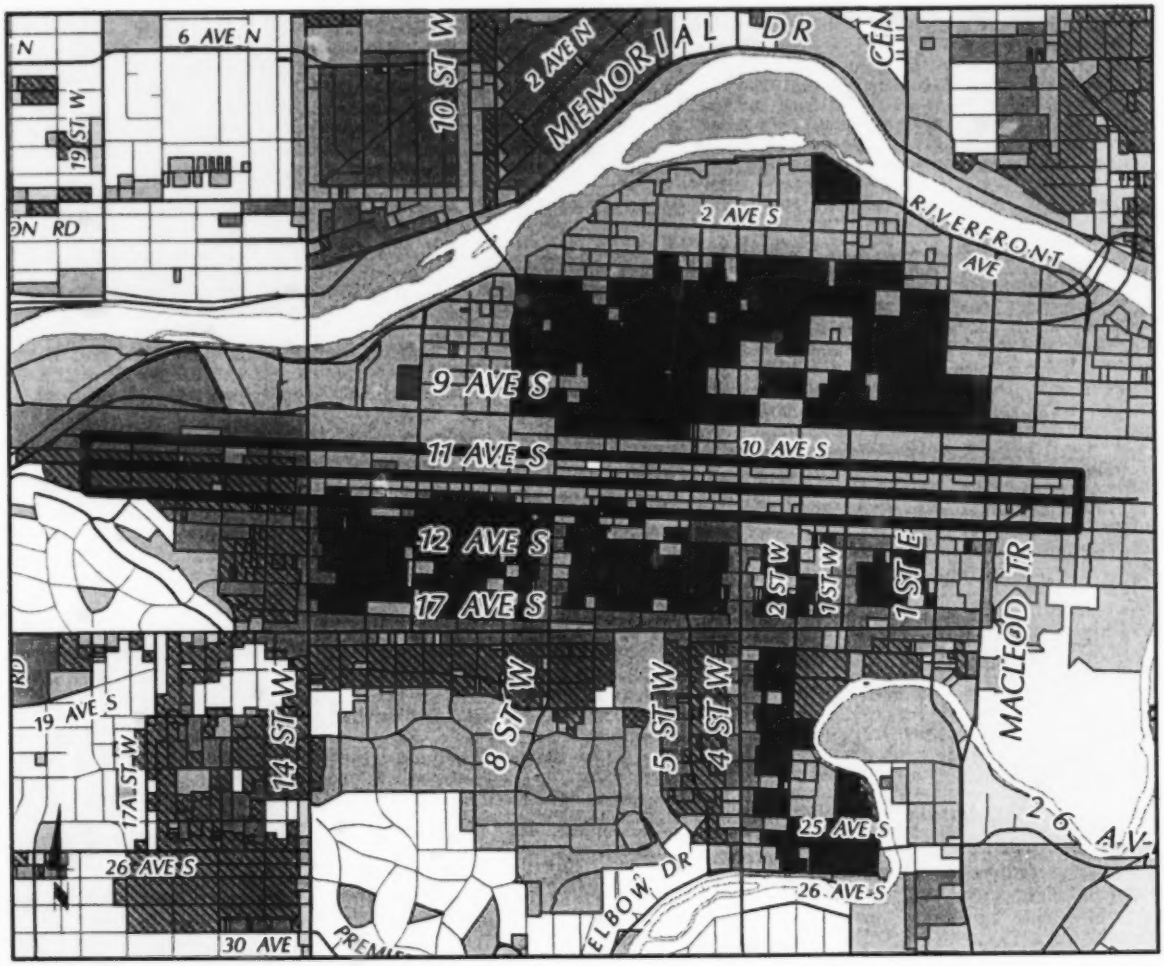
3. The Administration be directed to consider a pilot project of on-street parking during peak traffic in the afternoon on 4 Street SW between 17 Avenue and 26 Avenue SW, to be implemented following reversion of 2 Street and 5 Street SW to two way roads.

4. That the City and community embrace an ongoing commitment to establish and maintain a balance between community quality of life and safe and acceptable mobility for road users.

Inner City Transportation Study

10 Av S, 11 Av S,12 Av S

Between 19 St W And 4 St E



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10, 11 & 12 Avenue SW from 19 Street SW to 4 Street SE

Land Use And Planning Context

These corridors extend throughout the area more commonly known as the South Downtown/Warehouse District. The South Downtown comprises one of the more diverse land use contexts within the city at large. Today (2000) 12,000 people work there and over 2,000 people live there; as a result a more diverse range of services is also evolving throughout the area. The downtown core to the north and the high density Connaught residential district to the south are major influences on this environment.

Mobility

The conversion of 11 and 12 Avenues from two-way to one-way streets occurred during the 1960's along with the conversion of several roads in the downtown north of the tracks. These one-way roads became an integral component of the proposed South Downtown By-Pass, which was proposed to connect to Crowchild Trail on the West and Blackfoot Trail and Deerfoot Trail on the East. In 1995, City council abandoned the South Downtown By-Pass when it approved the Calgary Transportation Plan. 1998, maximum daily traffic volumes are 14,000 on 10 Avenue SW, 24,000 on 11 Avenue SW and 22,000 on 12 Avenue SW.

In order to increase access to this part of the city, it would be appropriate to permit a full east/west movement across 14 Street West at 10 Avenue South. This would have the effect of increasing the capacity of routes from the west (i.e. Bow Trail, Crowchild Trail southbound). Initial studies, including the work of the Panel, indicate this may be feasible, but further work is required to confirm it.

Balancing The Triangle

As described in the introductory Goal & Principle section, when Council approved the Calgary Transportation Plan in 1995, it not only removed the south Downtown By-Pass from the Plan and Bylaw; it also embraced a very different philosophy particularly with respect to Downtown Mobility and Inner City quality of life.

The impact on mobility of converting 11 and 12 Avenue back to two-way has been subsequently investigated and the analysis indicates that there will be no significant negative impact relative to mobility. From a local perspective, circulation will be enhanced with the conversion back to two-way, however, some locations (sites and intersections) may be problematic from an operational perspective as the access, egress and turning movement has developed around a one-way system with considerable history. A full Transportation System Management Plan, in consultation with affected stakeholders, will now be undertaken to address problem areas and issues and confirm the overall benefit of the conversion.

From a network mobility perspective, the analysis to date would indicate that the conversion back to two-way is a feasible alternative. From a local mobility and circulation perspective, the proposed conversion is a very desirable and beneficial proposition. From an overall planning perspective, that is, land use, quality of environment and quality urban place building perspective, the conversion is fundamental. The future of the community, business and social environment will be significantly improved with the proposed conversion. From a cost/affordability perspective, the conversion back to two-way will require in the order of $1.5 million, primarily related to intersection traffic signal changes. The future of the community, business and social environment will be significantly improved with the conversion.

Summary

The conversion of 11 and 12 Avenues to a two-way operation, with the possibility of increased capacity due to opening up the intersection of 10 Avenue at 14 Street SW, would address both environmental and capacity issues.

In order to finalize a commitment and implement the conversion of these roads, it is necessary to undertake a detailed TSM Transportation System Management Study.

Recommendation

1. That the Administration be instructed to undertake a Transportation System Management study of the conversion of 11 and 12 Avenues SW back to a two-way system in consultation with affected stakeholders and report the results to Council through the Transportation, Transit and Parking Committee.

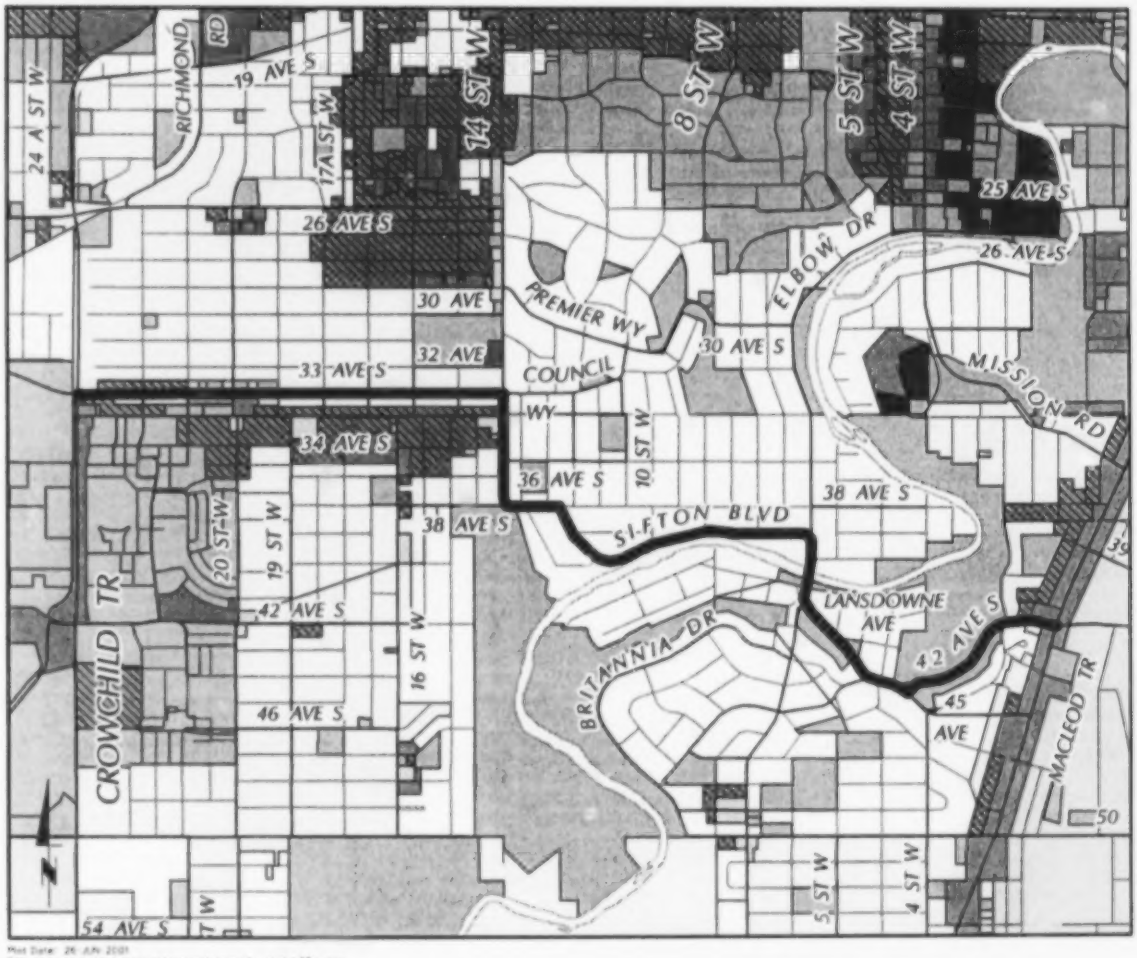
2. That a study be undertaken regarding the feasibility of achieving a full through movement east/west at 14 Street and 10 Avenue SW.

3. The study will make its recommendations based on the overall planning merit of the conversion as this is a situation when issues of network, mobility, local mobility and achieving important planning objectives are inseparable. Accordingly, the Terms of Reference for the study should utilize and address the analysis recommendations of the Technical Review Panel as a guiding framework.

4. That the City and community embrace an ongoing commitment to establish and maintain a balance between community quality of life and safe and acceptable mobility for road users.

Inner City Transportation Study

33 Av SW, Sifton Bv SW, Landsdowne Av SW



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33 Avenue SW/Sifton Boulevard SW, Lansdowne Avenue SW between Crowchild Trail and Macleod Trail

Introduction

Collectively these three corridors linked by 14 Street/38 Avenue and Elbow Drive have become a proxy for the missing major arterial east/west link between 9 Avenue South and Glenmore Trail. For the purposes of clarity, this report has combined the analysis and recommendations.

Land Use And Planning Context

33 Avenue SW between Crowchild Trail to 14 Street SW

This corridor is comprised of two very different yet interdependent environments from a land use and planning perspective. The Marda Loop business district forms the westerly portion of the corridor; the easterly balance is entirely low density residential. Each of these environments has been and will be effected the ongoing growth to the west including the redevelopment CFB Calgary. The surrounding subdivision pattern is based on a traditional gridiron pattern with a high degree of consistency and permeability.

Sifton Boulevard/Lansdowne Avenue SW from 14 Street/38 Avenue South to Macleod Trail South

These two corridors traverse low-density community environments with adjacent single family housing, and an elementary school; the Elbow River and parkway are common features and amenities along each road. The subdivision plan north of the river is a relatively conventional gridiron with the blocks running north/south.

Mobility

33 Avenue SW

Historically, 33 Avenue was designated as a major road connecting to 14 Street, another major road, leading to the Downtown. At the request of the community, this designation was changed to collector in the 1980's. Thirty-third Avenue is the entryway and first stage in a corridor that provides the only east/west access across the Elbow River between 9 Avenue and Glenmore Trail. The majority of traffic using this corridor has an origin east of Crowchild Trail (i.e. within the inner city); however, accelerated growth to the west and high levels of employment growth to the east and Downtown, has resulted in significantly increased traffic volumes from other areas as well.

Transportation planning decisions in the 1950's did not adequately address future growth demand generated by employment in the NE and SE employment areas. Glenmore Trail, Bow Trail and 17 Avenue provide

alternate routes; however, this corridor continues to attract increasing levels of external traffic. The very consistent and legible gridiron road network surrounding this corridor also lends itself to traffic infiltration as well.

The westerly portion of 33 Avenue also forms the main street for the Marda Loop business community, which generates considerable vehicular and pedestrian traffic. The interface with Crowchild Trail is poor as is the interface with the business area and is reflective of the ongoing confusion between its former role as a designated major road and its intended role as a more local resource and amenity.

Sifton Boulevard SW/Lansdowne Avenue

Sifton Boulevard and Lansdowne Avenue are collector roads serving a network function in a residential environment. The subdivision pattern and resultant road network adjacent to Sifton Boulevard is much more susceptible to spillover traffic than is the area adjacent to Lansdowne Avenue.

The local community network relies on Sifton Boulevard, 38 Avenue and 36 Avenue for primary access and egress to and from the community. Today, 38 Avenue and 36 Avenue parallel Sifton Boulevard and provide direct and alternate access between 14 Street and Elbow Drive. Thirty-fourth Avenue is discontinuous between 8 and 8A Street. (The 34 Avenue alignment was in fact, one proposed arterial alignment between Crowchild Trail and Elbow Drive in the 1950's that was not built.)

Elbow Drive provides the necessary north/south link across the Elbow River between Sifton Boulevard and Lansdowne Avenue. In conjunction with 33 Avenue South it completes the connection from Crowchild Trail to the Macleod Trail corridor providing access to the south and east employment areas. Sifton Boulevard also provides a direct link from Elbow Drive to 14 Street South providing an alternate route to the downtown from the south. Between 1996 and 1998, daily volumes have increased from 14,000 to 16,000 vehicles/day on Sifton Boulevard. This volume increase is attributed to the ongoing growth rate particularly in the west sector of the city along with expanding growth in the south and easterly employment areas.

Balancing The Triangle

From a network mobility perspective, 33 Avenue as a component of an inner city east/west corridor, is a long established route. City-wide land use patterns and growth dictate that traffic volumes will continue to increase on this corridor, as they will throughout the inner city. Traffic generated within the inner city should and must be able to access this corridor. Traffic generated outside (i.e. west of Crowchild Trail) should and must be moved onto the major network components (e.g. Glenmore Trail and Crowchild Trail). Effective, aggressive measures to curb the growth in external traffic at Crowchild Trail and 33 Avenue will also accrue downstream benefits for Elbow Park and Mount Royal communities.

From a network perspective the 33 Avenue Corridor Strategy is to aggressively impede the growth in external traffic (i.e. originating west of Crowchild Trail), this will primarily address concerns related to a.m. peak demand. At the other (i.e. eastern) end it is necessary to also impede the growth in external traffic most appropriately along Lansdowne Avenue where more aggressive measures such as 4-way stops will not result in severe spillover since alternate routes are not readily available, these measures are intended to address a.m. and p.m. peak concerns.

Summary

Addressing the legitimate concerns of adjacent communities directly affected by the ongoing demands of growth requires a comprehensive full corridor strategy. The proposal is to deal with the problem at its source, that is Crowchild Trail in the west and Lansdowne Avenue in the east. These measures must be developed and implemented in the near future and assessed for their impact and effectiveness.

Recommendation

33 Avenue SW

1. That 33 Avenue between Crowchild Trail and 20 Street be described as a Secondary Route.

2. That subject to broad community input, a 40 km/h zone be implemented between Crowchild Trail and 14 Street South.

3. That the description of 33 Avenue SW between 14 Street and 20 Street SW be changed from that of Supporting Roadway to that of Minor Collector, and further that traffic mitigation measures be directed to reduce volume and speed and not to be implemented to change the role and function of 33 Avenue SW between 14 Street and 20 Street SW.

4. That the following "Recommendations" from the Technical Review Panel be used as a basis of discussion in developing the Streetscape plan for 33 Avenue with the community and other affected stakeholders.

    a. Major gateway features immediately east of Crowchild Trail and west of 14th Street West be installed to convey to motorists that 33 Avenue is not a high-speed environment, but rather a 40 km/h zone.

b. Traffic calming measures be considered, including such elements as the following:

- A speed hump at both ends of 33 Avenue SW (80mm high, 3m in length plus 2m ramp) or platform intersections;
- More and larger mid-block bulbs along 33 Avenue SW
- Conversion of the crosswalk at the western end of 33 Avenue (at 22nd Street SW) into a pedestrian corridor if warranted. If a pedestrian corridor not warranted enhanced lighting and bulbing are recommended; and
- Traffic calming to reduce/eliminate traffic diversion from 33 Avenue to 34 Avenue.

c. Enhancement of the pedestrian environment of the Marda Loop area is recommended. This area resembles more of an auto-oriented environment than a pedestrian environment. One suggestion would be to create a "penalty box" (scramble) pedestrian crossing at the intersection of 20 Street SW. Another alternative would be to construct a platform (raised) intersection. We note that raised intersections discourage high speeds and the elevation difference does not affect transit operations or EMS. This is the location of highest pedestrian activity and highest pedestrian-vehicular conflict.

5. That the Calgary Cycle plan explore the feasibility of 34 Avenue as a designated cycle route.

6. *"That 24 hour on-street parking along 33 Avenue between 14 Street, SW and 22 Street, SW shall be retained as per the current situation, and that it not be restricted during rush hour under any new classification proposed, for the reason that it forms a necessary part of traffic calming measures."*

Sifton Boulevard/Lansdowne Avenue SW

1. That Sifton Boulevard between 14 Street and Elbow Drive SW be described as a "Minor Collector" (residential collector) and further that traffic mitigation measures be directed to reduce volume and speed and not be implemented to change the role and function of Sifton Blvd.

2. That a streetscape/traffic calming process be undertaken for Sifton Boulevard with full community consultation and utilizing the intent, observations and ideas developed in the Technical Review Panel Report #3, page 8, items 1 through 6.

3. That subject to broad community input, a 40 km/h zone be implemented between 14 Street and Elbow Drive.

Lansdowne Avenue

1. That Lansdowne Avenue between Elbow Drive and Macleod Trail be described as a "Minor Collector" road.

2. That subject to broad community input, a 40 km/h zone be implemented between Elbow Drive and Macleod Trail.

3. That a streetscape/traffic-calming plan be developed based on the intent, observation and ideas developed in the Technical Review Panel Report #13, pages 10 and 11.

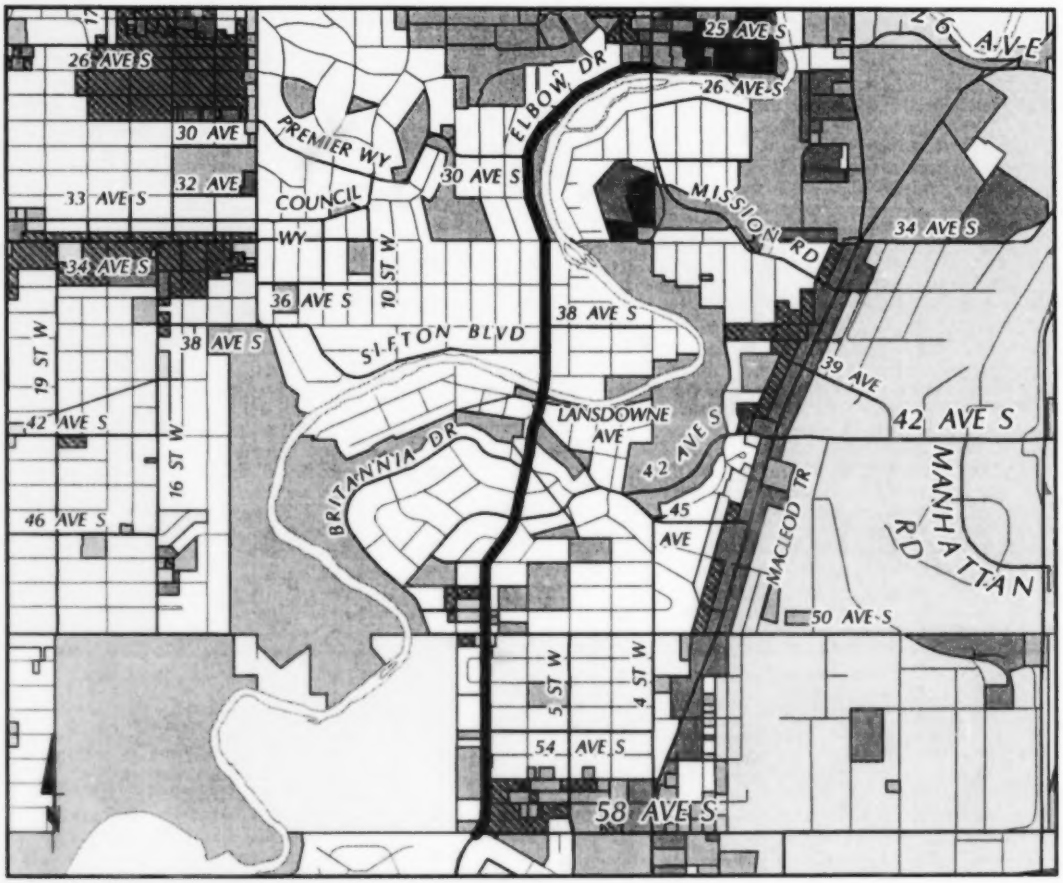
For these Corridors

1. That the City and community embrace an ongoing commitment to establish and maintain a balance between community quality of life and safe and acceptable mobility for road users.

Inner City Transportation Study

Elbow Dr SW

Between 4 St SW and 58 Ave SW



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Elbow Drive From 26 Avenue To 58 Avenue SW

Land Use And Planning Context

Elbow Drive serves the communities between 26 Avenue and Canyon Meadows Drive dating from the early 1900's to the present day. All of these communities are predominantly single family as is virtually the entire frontage along Elbow Drive. Between 4 Street and 34 Avenue, the Elbow River and Parkway form the easterly edge condition. Some retail and service commercial activities are located at the junctions of 50, 58 Avenues and Glenmore Trail. Elbow Drive subdivisions developed in the early part of the century typically provided extensive front yards on large, single family lots. More conventional yard setbacks are to be found as later development extends southward.

The proposals of this plan ONLY DEAL with the portion between 26 Avenue and 58 Avenue SW.

Mobility

Elbow Drive is another road that has and will continue to experience increased pressure and traffic volumes (1998: 27,000 - 30,000 vehicles/day). This is primarily due to the catchment it readily serves to Downtown from the far south; and because of the "missing link" (i.e. 14 Street south of 38 Avenue to the west.

Other important contributing factors include Macleod Trail capacity constraints and the extraordinary rate of growth the city has and will likely continue to experience. In the 1980's, City Council approved the reclassification of Elbow Drive from Major Road to Collector Road. During the intervening years, the only measure that has been introduced to reflect that intent was the introduction of the extended playground zone and thus, traffic on this route has continued to grow.

The construction of the grade separated interchange at Glenmore and Elbow Drive will further enhance the attractiveness of this road both from a north-south perspective and because it will improve the eastbound to northbound movement off of Glenmore Trail.

Balancing The Triangle

Elbow Drive in the south, like Memorial Drive in the north, is one of the more picturesque drives in the city and it serves both a local collector and regional function for a large catchment area. Fewer traffic controls make Elbow Drive a very attractive alternative to Macleod Trail S. Construction of the interchange at 25 Avenue and Macleod Trail and the 26 Avenue connector between Blackfoot Trail and Macleod Trail would lessen the pressure on Elbow Drive by improving the performance and attractiveness of these alternate routes.

Addressing the issues and concerns of the neighbourhood it passes through directly at the local level is also a challenging task. Today, Elbow Drive is a relatively high speed environment. The extended playground zone and enforcement have provided some relief, however, strong community concerns remain. The challenge here is to introduce measures which will improve the environment for adjacent residents, pedestrians and cyclists while allowing the road to carry a large volume of vehicles. The Panel is of the view and Administration agrees, that this could be achieved with a 40 kph speed limit. The introduction of a 40 km/h zone is proposed for this corridor as a means to create a much safer driver, pedestrian and cyclist environment without reducing the capacity of the road to handle the demands placed on it. To achieve a greater degree of compliance, the streetscape environment must be changed to reinforce that objective along with consistent enforcement.

Summary

To address the issues and concerns of the adjacent communities as well as the mobility concerns of the city, it is proposed that between 26 Avenue South and 58 Avenue south, a 40 km/h zone be established. At the same time, an urban design exercise be undertaken that will strive to recreate an environment conducive to compliance with the 40 km/h speed zone and safer driving conditions.

Recommendation

1. That Elbow Drive be described as a "Secondary Route".

2. Subject to broad community consultation, a 40 km/h zone be established between 26 Avenue and 58 Avenues SW.

3. That an urban design streetscape plan be developed in stages for this corridor and preparation of the plan should occur in the next 12 months. The intent observations and ideas generated by the Technical Review Panel Report #12, pages 4, 5 and 6 should help inform and guide the plan development process.

4. That the City and community embrace an ongoing commitment to establish and maintain a balance between community quality of life and safe and acceptable mobility for road users.

Inner City Transportation Study

Mission Rd SW /4 St SW
Between 26 Av SW and MacLeod Tr S

Plot Date: 26 APR 2001
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4 Street and Mission Road SW South of 26 Avenue

Land Use And Planning Context

This roadway serves the Rideau-Roxboro and Rideau Ridge communities. Rideau-Roxboro is predominantly low density residential; Rideau Ridge is relatively high density residential, located on a plateau above Roxboro and is more commonly know as Rideau Towers. Major open space features border Mission Road as it interfaces with north Parkhill/Stanley Park.

Mobility

Mission Road/4 Street SW was originally conceived and developed as a collector roadway serving a local purpose. Today, Mission Road is fulfilling broader system demands due to deficiencies in the network (i.e. no proper arterial east-west connection in the south inner city), location, (i.e. Mission Road provides an Elbow River crossing, giving alternate access to and from the Downtown and south and easterly employment areas of the city). From a local community circulation perspective, Mission Road is critical in that it provides the only access and egress to and from the community.

Balancing The Triangle

From a network and system demand perspective, it may not be possible to divert external traffic to an alternate route without severely impeding access and egress to the residents of the community itself. Construction of a grade-separated interchange at Macleod Trail and 26 Avenue SW may lessen the demand on Mission Road.

Mission Road/4 Street SW will continue to fulfill a role that is more than that of a typical collector. The introduction of streetscaping incorporating suitable calming measures must be implemented, assessed for effectiveness and modified as necessary over time.

Summary

Streetscape and traffic-calming plans developed jointly by the community with the Administration can be completed this year, (2000) and are intended to address safety and environmental concerns with the community.

Recommendation:

1. That the Administration continue to work with the community to implement streetscape and traffic-calming measure in the immediate future.

2. The installation of permanent traffic calming facilities along 4 Street/ Mission Road between 26 Avenue and Macleod Trail.

3. Adjustments to the left-turn signal at the intersection of Mission Road/ Macleod Trail should continue to achieve an acceptable balance between community quality of life and safe mobility.

4. That consideration be given to advancing the construction of 25 Avenue/Macleod Trail interchange as part of the Transportation Infrastructure Investment Plan Annual Review.

5. That the description of 4 Street/Mission Road south of Elbow Drive to Macleod Trail; be changed from that of Supporting Roadway to that of Minor Collector, and further that traffic mitigation measures be directed to reduce volume and speed and not to be implemented to change the role and function of 4 Street/Mission Road .

7. That the City and community embrace an ongoing commitment to establish and maintain a balance between community quality of life and safe and acceptable mobility for road users.